Joint Surveillance Target Attack Radar System, Common Ground Station

DESCRIPTION

The JSTARS is a long-range, air-to-ground surveillance system, composed of an airborne element and a ground element. The airborne element, the E-8C aircraft, contains a large phased array radar on the fuselage and multiple OZ-63 Air Data Terminal (ADT) operator terminals. Radar data is distributed via an encrypted, jam-resistant Surveillance and Control Data Link (SCDL) for transmission to one of two JSTARS ground systems: the Common Ground Station (CGS) or Joint Services Workstation (JSWS). The sensor suite provides detection and tracking data on targets through the use of the Moving Target Indicator (MTI), Fixed Target Indicator (FTI), Synthetic Aperture Radar (SAR) and Unmanned Aerial Vehicle (UAV). FTI and MTI data detect, locate, and identify the movement of enemy targets, while SAR identifies critical fixed targets such as bridges, harbors, airports, buildings or stopped vehicles. The CGS is a ground receive and processing display system and receives JSTARS data directly from the E-8C JSTARS aircraft through the SCDL to the Ground Data Terminal. Once JSTARS data is collected at the ground-receive site, MTI/FTI/SAR data will be sent across the Marine Air Ground Task Force Command, Control, Communications, Computers and Intelligence network through existing and evolving tactical data networks. The CGS is also capable of receiving and fusing imagery data from UAVs directly onto JSTARS data, providing an enhanced collection processing capability. The JSWS is a functionally equivalent, transit cased subset of the CGS. The JSWS can be used in conjunction with a dedicated SCDL, but typically gets its JSTARS data via a Secret Internet Protocol Router Network connection or a Satellite Communications feed.

OPERATIONAL IMPACT

The CGS and JSWS support a wide range of global missions including wartime battlefield management; low, medium, and high intensity crisis management; peacekeeping operations; war on drugs; and contingency operations. Operating in diverse climates (geographic and weather conditions), the CGS allows commanders to view the battlespace and make decisions with the highest possible level of certainty. As an all-weather, organic Marine Corps intelligence asset, the CGS and JSWS have played a crucial role on the Global War on Terrorism, resulting in JSTARS assuming an additional mission of Improvised Explosive Device prevention and detection

PROGRAM STATUS

The JSTARS is a joint program and is post-Milestone C. The Marine Corps currently has fielded three JSTARS CGSs and five JSWSs. Each Marine Expeditionary Force has a CGS and JSWS, and the remaining two JSWSs are used for test and evaluation and development of future MTI initiatives.

The program is currently conducting two levels of efforts: maintenance and

upgrade of the current JSTARS ground systems, and research and development of future MTI collection capabilities.

Procurement Profile:	FY 2007	FY 2008
Quantity:	0	0

Developer:
Prime Hardware Integrator: General Dynamics Command, Control, Communications, and Computers (GC4S), Scottsdale, AZ

Software Integrator: Harris Corporation, Melbourne, FL

Surveillance Control Data Link (SCDL) Developer: Cubic Defense Systems, San Diego, CA